

DEFENSE INFORMATION INFRASTRUCTURE (DII)

COMMON OPERATING ENVIRONMENT (COE)

DII COE Version Description Document for CALC Application Segment v1.0.0.1 (Solaris 2.5.1) Version Description Document 3/7/97

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1. System Overview

The CALC application is intended to support the DCE development environment. It is an example of how to use the simplified DCE API library when programming DCE applications. The CALC application consists of one IDL interface with two functions (add and subtract). Each function has its own set of permissions and the acl manager controls access to both. The client can employ two different methods for locating a server (chosen by an #IF statement in the CALCclient.c routine). The 'simple' method that selects any available server or the 'complex' method that obtains information about each server and makes an educated choice. For this example, the CALC application only uses the 'simple' method

2. Reference Documents

- *Transarc DCE Introduction*
- *Transarc DCE Command Reference*
- *OSF® DCE Application Development Guide - Introduction and Style Guide*
- *OSF® DCE Application Development Guide - Core Components*
- *OSF® DCE Application Development Guide - Directory Services*
- *OSF® DCE Application Development Reference*

3. Version Description

3.1 Inventory of Materials

- Magnetic Media: Two 8mm tapes consisting of relative tar of the CALC Application Segment, Version 1.0.0.1/Solaris 2.5.1, March 7, 1997
- Version Description Document Defense Information Infrastructure (DII) Common Operating Environment (COE) CALC Application Segment, Version 1.0.0.1, March 7, 1997
- *Installation Instructions for the CALC Application Segment v1.0.0.1*, March 7, 1997

3.2 Software Changes

See Appendix A

4. Installation Instructions

Reference the *Installation Instructions for the CALC Application Segment v1.0.0.1* for instructions on installing the CALC Segment.

5. Known Problems and Errors

There were no problems reported against the CALC Segment.

6. Release Notes

6.1 System Preparation

There are several steps that should be taken before installing the CALC Segment. If these steps are not taken, errors will occur during installation and runtime.

An account must be created in the Unix system for the CALC server to use. It is best to name this account CALC in order to avoid confusion. Consult the COE procedures to create the new account. The account should be a no-login account (no password) and can belong to any group

On some machines (those operating under the Solaris 2.4 operating system), the security policies may need to be changed in order for the CALC Segment to function. Enter the command:

```
dcecp> registry show -pol
{acctlife unlimited}
{maxtktlife +0-06:00:00.000I-----}
{maxtktrenew +28-00:00:00.000I-----}
{pwdalpha no}
{pwdexpdate none}
{pwdlife +180-00:00:00.000I-----}
{pwdminlen 8}
{pwdspaces no}
```

The security policies are displayed. For the CALC Segment to function, `pwdalpha` should be set to yes. To change this policy enter:

```
dcecp> registry modify -pwdalpha yes
```

6.2 Icons and Menu Items

The CALC Segment comes with icons and pull-down menu items to allow activate the CALC server and CALC client without allowing command line access. The menu items are available upon installation. Simply log out and log back in. This will allow the menu bar at the top of the screen to include the new entries. The icons, however, must be assigned to a profile before they can be made available. Reference the Installation Instructions for the procedures on assigning applications to profiles. The icons and the menu items both create a new terminal that prompts you for a DCE login. This login identity will be used to start the process. One must, of course, be part of the correct DCE group in order to start the process (CALC-users for CALCclient and CALC-admin for CALCserver).

6.3 Warning Messages

These messages are warnings that one may encounter during the installation of the CALC Segment. These warnings are to be expected and do not pose a problem to the installation process.

Warnings during CALC application Installation:

```
directory create ./h ->Specified full name already exists
```

This directory create message is expected because the segment is trying create the ./h directory. This directory is the standard location for the software in CDS. Thus it already exists. The installation will proceed despite the warning.

```
organization create $orgname ->Name already exists
```

This error simply states that the CALC segment tried to create the organization to operate under and the organization name already exist. The installation will proceed normally and the CALC segment will operate under the specified organization.

Warnings during CALC server Installation:

```
principal delete $_h/${SEGMENT}server -> Registry object not found
```

This error is normal during the first time installation of this option. The segment is trying to delete the CALCserver account before the account is recreated. During a first time installation, this principal is not present.

Warnings during CALC Deinstallation:

During deinstallation the system may produce warnings with regards to the icon entries:

The following entries appear in the database only:

```
Applabel => Start CALC Client
Acctgroup => System Admin
Scope => LOCAL
```

```
Applabel => Start CALC Server
Acctgroup => System Admin
Scope => LOCAL
```

```
Do you wish to delete these entries from the database? (Y/N)
```

This error results from the icons being removed from the main icon file but not removed from the Security Database. Answer 'Y' to allow the system to purge these stray icon entries from the database. You should receive the following response:

```
Do you wish to delete these entries from the database? (Y/N)
Y
```

```
Deassigning App From Profile :
  Profilename => SA Default
  Profilename => LOCAL
  Applabel    => Start CALC Client
  Acctgroup   => System Admin
  Status      => 0
```

```
Deleting Application Data :
  Applabel    => Start CALC Client
  Acctgroup   => System Admin
  Scope       => LOCAL
  Status      => 0
```

```
Deassigning App From Profile :
  Profilename => SA Default
  Profilename => LOCAL
  Applabel    => Start CALC Server
  Acctgroup   => System Admin
  Status      => 0
```

```
Deleting Application Data :
  Applabel    => Start CALC Server
  Acctgroup   => System Admin
  Scope       => LOCAL
  Status      => 0
```

```
Adding 'System Admin' Account Group Apps To Database... Scope = 'g'
Adding 'Security Admin' Account Group Apps To Database... Scope = 'l'
Adding 'Security Admin' Account Group Apps To Database... Scope = 'g'
```

These messages indicate that the icons are being removed from their assigned profile (in this case SA_Default) and then removed from the Security Database.

6.4 DCE Namespace Structure

These diagrams illustrate how the DCE namespace is used by the CALC segment. This behavior is typical of DCE applications using the DCE API library. By looking for these changes, one may verify the segments installation

This diagram shows additions made to the CDS namespace:

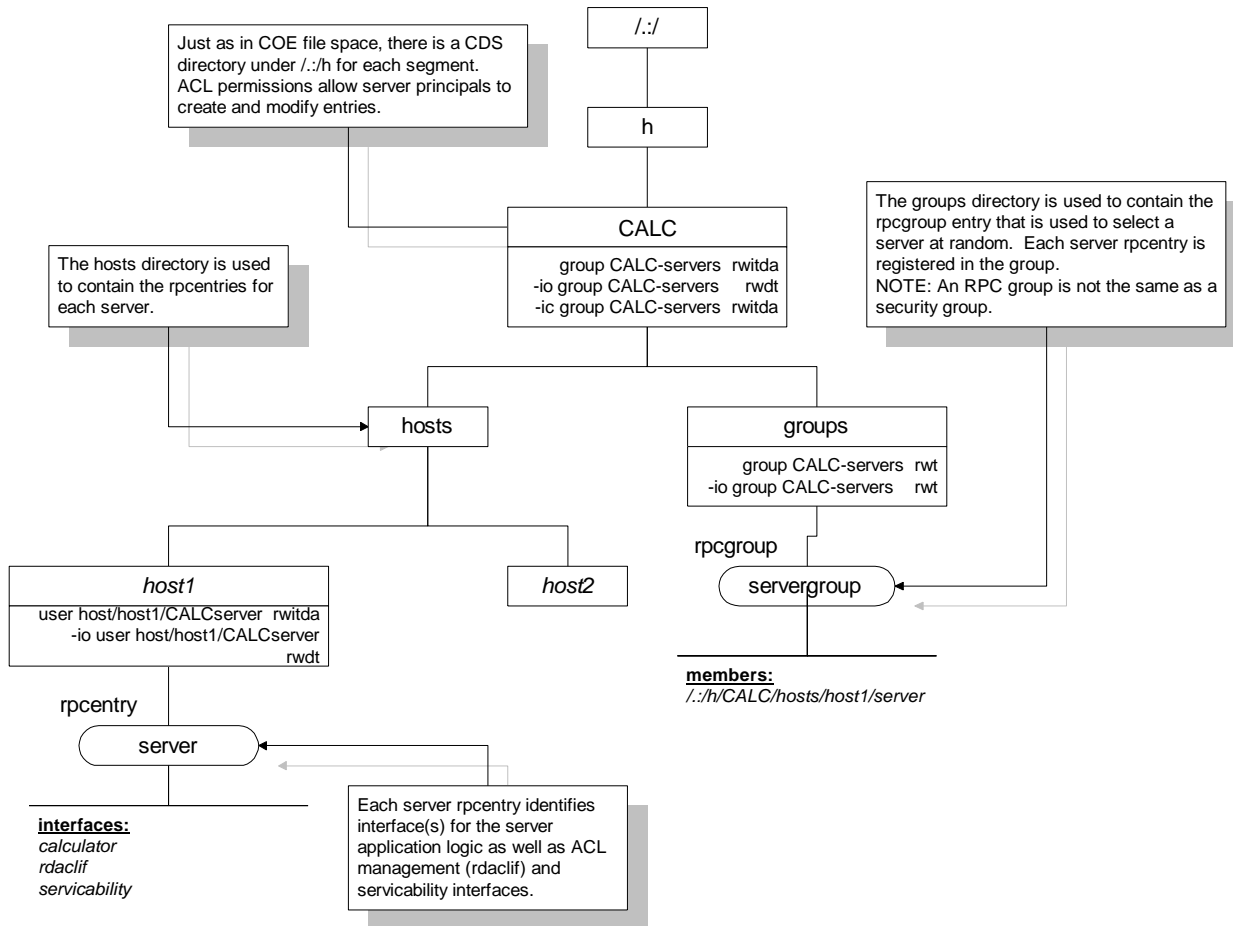


Figure 1 CDS Namespace

This diagram show the Security Registry

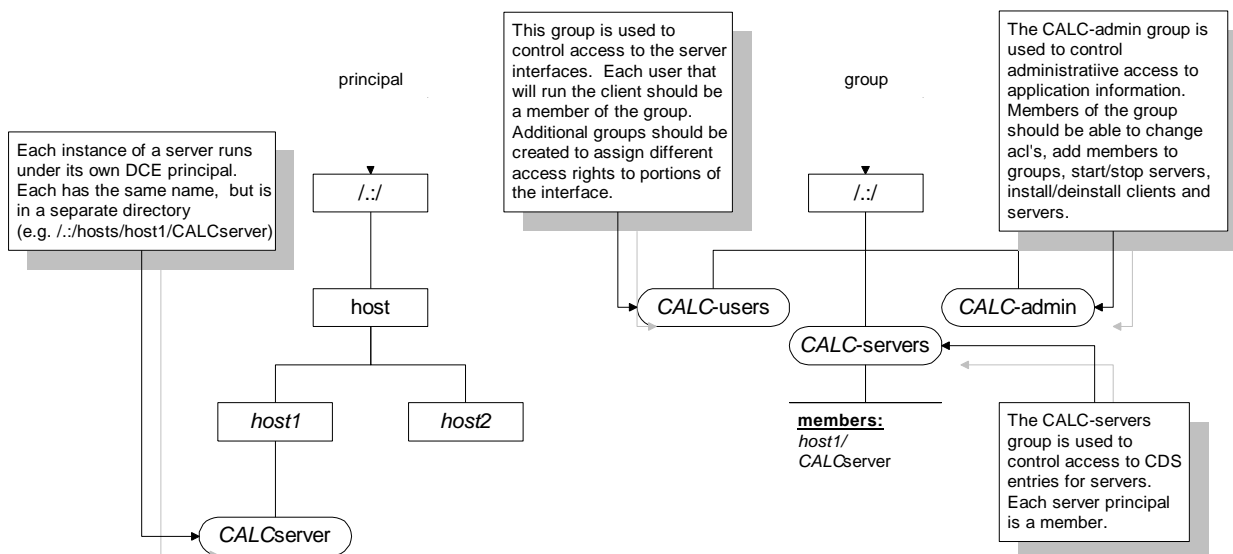


Figure 2 Security Registry

This diagram shows the use of `svrconf` and `xattrschema` in the host namespace.

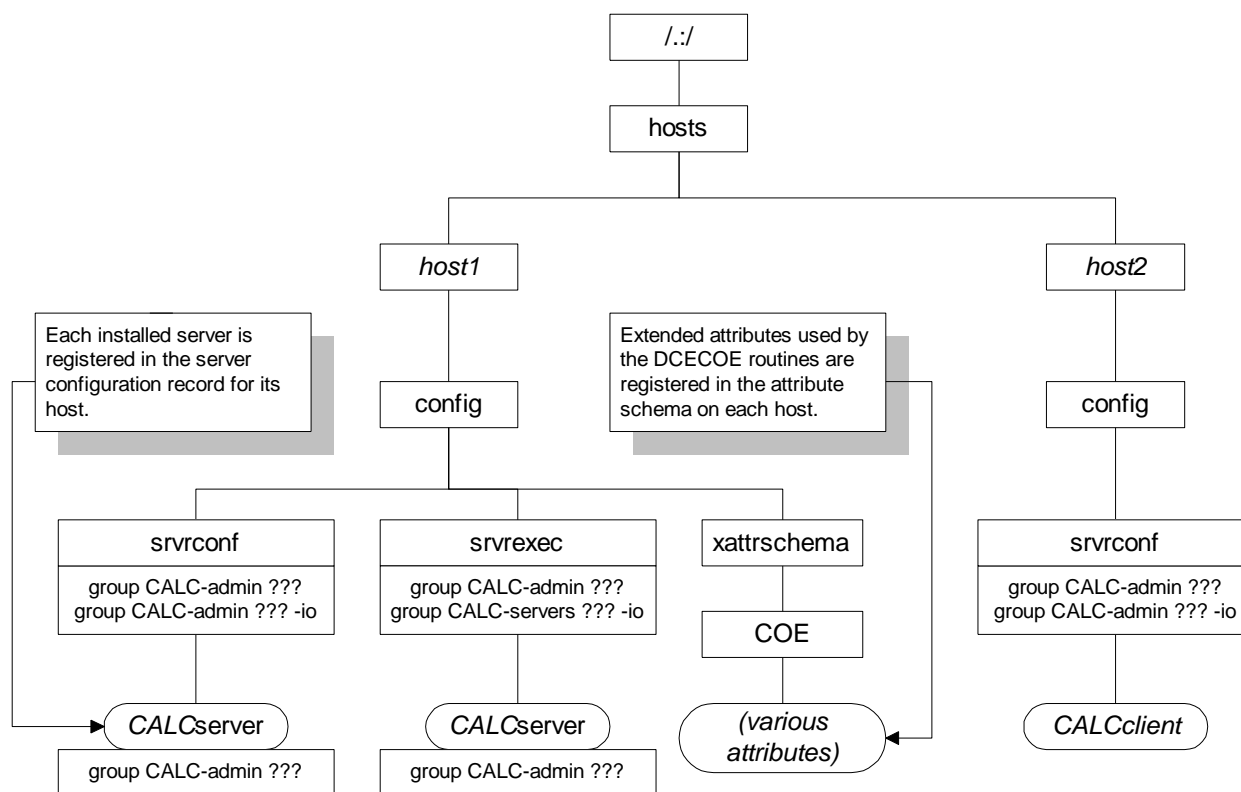


Figure 3 Host Namespace

7. Patch List

There are no patches in the CALC application segment

Appendix A

Software Changes

This version of the CALC Segment has been compiled against the new DCE API's version 1.1.0.0. This change did not alter the functionality of the segment. This version also includes icons and pull-down menu items that start the CALC server and CALC client processes without allowing command line access